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# THE JEWISH COLONISATION IN PALESTINE

# ITS HISTORY AND ITS PROSPECTS

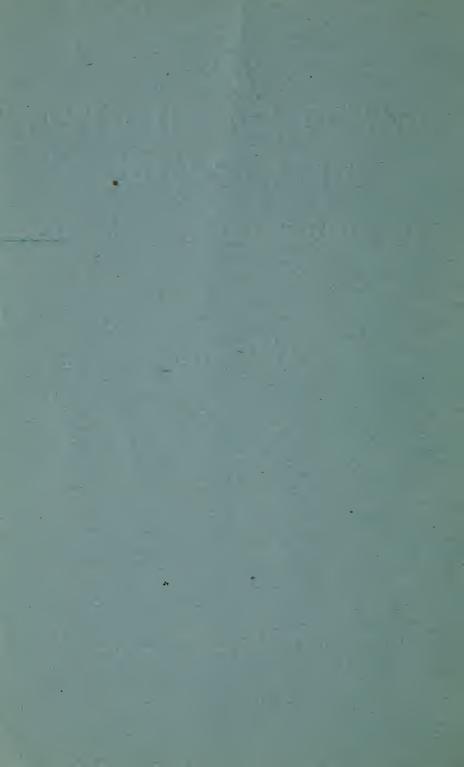
Ву

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(Agricultural Engineer, Jaffa).

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# The Jewish Colonisation in Palestine.

## ITS HISTORY AND ITS PROSPECTS.

By S. TOLKOWSKY (Agricultural Engineer, Jassa).

THE idea of an agricultural colonisation of Palestine by the Jews is not an entirely new one. As early as the end of the sixteenth century Don Joseph Nasi, a Jewish Duke of Naxos, began to rebuild the town of Tiberias, and in order to induce the inhabitants to take up silk culture, he planted there a large number of mulberry-trees. In 1629 Moses ben Joseph of Trani reported that the Jews of Palestine were engaged in the cultivation of cotton, cereals, and vegetables, and in the rearing of silkworms and bees.\* It is difficult to say precisely for what reasons they subsequently abandoned agriculture; the fact remains that a century ago the eight or ten thousand Jews who inhabited Palestine were strictly confined to a few towns (Jerusalem, Tiberias, Safed), and had no relations with any Jewish community outside the country.

It was not until about the middle of last century that the European Jews began to interest themselves in the possibility of an agricultural colonisation of Palestine. In 1854 Sir Moses Montefiore, whose interest had been aroused as a consequence of several visits to the country, was received by the Sultan, and had an interview with the British Ambassador, Lord Stratford de Redcliffe, regarding purchases of land which he wished to make in Palestine. † The practical result of his efforts was that he gave thirty-five families of

Safed the necessary means for setting up farms.

About 1860 some Russian Rabbis started a project for

\* D. Trietsch: "Palästina-Handbuch" (1912).

<sup>†</sup> In 1845 Colonel Gawler, a British officer, founded a colonising society with the same object, but in view of the unsettled situation which followed the Turco-Egyptian War, his projects could not be realised. (D. Trietsch, op. cit.)

colonising Palestine with Russian and Rumanian Jews. and thanks to the support of liberal Jewish circles, the Alliance Israelite Universelle of Paris became interested in the idea. This society sent a special envoy to make an investigation on the spot, and as a result of his report it was decided to found in Palestine an agricultural school for Jewish children of the Near Eastern countries. The Ottoman Government granted the society 625 acres of land situated near Jaffa, on the road to Jerusalem, and it is here that, in 1870, was founded the farm-school of Mikweh-Israel, in which the pupils are taught all branches of agriculture, and in particular the culture of the vine and of other fruits. Many old pupils of this school are to-day teachers of agriculture in the schools of various Jewish colonies; others are engaged in practical agriculture in Palestine or in the neighbouring Turkish provinces, as well as in Egypt.

In 1878 the idea of a Jewish settlement in Palestine was again broached by Laurence Oliphant and the Earl of Shaftesbury, with the result that some Jews of Jerusalem bought from an Arab of Jaffa 675 acres of land, situated nine miles from that city, on the banks of the River Audja, and

there founded the colony of Petach-Tikwah.

About the same time the persecutions of the Jews in Russia and Rumania, having become more severe, caused the idea of emigration and national settlement in Palestine to gain ground among the intellectual circles of those countries. Russia were formed students' clubs, the members of which intended to emigrate in groups to Palestine in order to become there the pioneers of colonisation; and at the same time a great colonising society was founded under the name of Chovere Zion (Lovers of Zion). It was partly such groups of students, and partly isolated arrivals from Russia and Rumania, who, between 1882 and 1884, founded in Judæa the colonies of Rishon-le-Zion, Wad-el-Chanin, and Katrah; in Samaria that of Zichron-Jacob; and in Galilee those of Rosh-Pinah, Yessod - Hamaaleh, and Mishmar - Hajarden. inhabitants of all these colonies had to cope with most serious obstacles. They were all children of the towns; none of them had the slightest knowledge of agriculture. Moreover, the conditions of the country to which they came were entirely different from anything that they had ever seen before. Ignorant of the language and the customs of the Arab inhabitants, unacquainted with the local laws, unfamiliar with those elementary principles of hygiene, the non-observance of which could not remain unpunished in a country where malaria-fever and other epidemic diseases were rampant, these first pioneers of Jewish colonisation in Palestine found themselves confronted with a task the execution of which exceeded by far the possibilities of their very limited financial means and their still less adequate technical training.

The difficulties resulting from their unpreparedness were intensified yet further by the unfavourable conditions prevailing in the country. Public safety was only a word in Palestine at that time. Public hygiene did not receive the least attention from the authorities, and the result was that the most important inland towns, as well as the greatest part of the maritime plain, were infested with malaria-fever and different eye-diseases. There were no physicians, no chemists, hospitals. There was as yet not a single railway line, and the few roads existing of old had been so neglected that they had become absolutely impracticable; in fact, carriages, camels, and horses used to travel through the fields alongside the roads, the latter serving only to show the right way. Cattle-breeding was almost impossible, because ever-recurring epidemics, which nobody attempted to fight, were allowed every two or three years to ravage the herds throughout the country. As for agriculture proper, there was no expert guidance as to which plants could most profitably be grown, and as to the methods of growing them; and in the absence of any guidance in this respect, the only way open to the Jewish settlers was to take a lead from the surrounding Arab population and to try to imitate as best they could the methods used by them. Unfortunately, however, the fellaheen, with their typical Oriental lack of foresight, which makes them constantly sacrifice the future to the present, have no other principle of agriculture than to try to make their fields yield as much as they can with their very primitive methods, and without ever troubling themselves about destroying weeds, removing stones, or even maintaining the fertility of the soil by replacing, in the shape of manures, the elements which the crops have taken away. It does not need the mind of an expert to understand that centuries of such treatment must have resulted in a heavy strain upon the once proverbial natural fertility of the soil of Palestine; but although in consequence of this decrease of fertility yields of the crops have become very poor, they are still sufficient to meet the needs of the Arab population, whose standard of living is extremely low. Not so with the Jewish immigrants, who brought with them requirements, in the matters of food, clothing, housing and hygiene, much more refined and much more difficult to satisfy. No doubt the soil can be cleaned of stones and weeds, its fertility can be restored and even increased; but this requires technical knowledge and considerable financial means, and the first Jewish colonists had neither. What happened was that when they had paid the purchase price for their land, when they had built their primitive cottages, when seeds and tools had been purchased, the colonists found that they had spent most of their funds before they had even gathered in their first meagre crop. And when the first crop, and the second, turned out to be utterly insufficient to furnish a living for the colonists and their families, the conviction dawned upon them that there must be something wrong in their work, and that a radical change of method was indispensable. But the available funds had been spent, and from without no adequate help was to be expected. In Russia the Chovevé-Zion movement was still in its infancy, and commanded but small financial means; whilst western Jewry, which had not yet been stirred by the call of Theodor Herzl, was ignorant of the very existence of the handful of pioneers who were struggling against overwhelming odds in their attempts to initiate the self-emancipa-

tion of the Jewish people in its historic home.

It was at this critical moment, in 1884, that Baron Edmond de Rothschild intervened. Having learnt by chance of the difficulties with which the young Jewish colonies were struggling, he sent a representative to Palestine with instructions to enquire into the causes of these difficulties and to determine the means to be employed for their removal. As a result of these enquiries, Baron Rothschild decided to take under his protection the four colonies whose situation was most embarrassing. His experts had rightly concluded that the exclusive cultivation of cereals neither provided sufficient income for the immediate sustenance of the colonists and their families, nor offered any favourable prospects for the future, and that it was necessary therefore to devote at least a part of the land to the cultivation of fruit trees. Accordingly, by order of the Baron large vineyards were planted with the best varieties of French vines, and at Rishon-le-Zion large wine-cellars were built with a total capacity of 1,650,000 gallons.

Between 1884 and 1888 he founded the new colonies of *Ekron*, *Sheveya*, and *Bath-Shlomoh*, and between 1889 and 1899 he bought many large sites in Lower Galilee and in Samaria, and 29,000 acres near El-Muzerib in Transjordania.

At the same time other colonies were established: Rechoboth (1890) and Chederah (1891), by Russian colonising societies; Mozah (1891), four miles from Jerusalem, by Jews from that city; Castinieh (1895) by the Russian Society of "Lovers of Zion"; Metula (1896), at the foot of Mount Hermon, by Rothschild; Artuf (1896) by a Bulgarian Society.

The example of these colonies, where the creation of vineyards had given work to a large number of settlers and labourers, induced other colonies to plant vines on a big scale, and to neglect almost completely the cultivation of any other crop. Monoculture, the exclusive cultivation of one plant, involves considerable risks even under normal conditions; in times of stress it generally proves fatal to those who have made it the basis of their economic life. Whilst the Jewish colonies were multiplying their vineyards, the price of wine on the European markets had begun to fall; and by the time that the Palestinian vineyards were reaching their full productivity, the price of wine had fallen so low that the piece of land possessed by each settler no longer yielded a nett profit sufficient to supply the needs of his family. In order to save the colonists from destitution, the Baron's administration, at very considerable sacrifice, went on taking over the wine at an artificial price high enough to allow the colonists to live. But, in consequence of the increasing yield of the vineyards, the deficit resulting from the difference between the price at which the administration bought wine from the colonists and the price at which it sold the same wine on the European markets soon became so enormous that the Baron was forced to admit that it would be impossible for him to continue the system indefinitely. He realised that radical reforms were needed, and that they could not lead to good results save through an organisation specially prepared for colonising He approached the Jewish Colonisation Association (the "J.C.A."), and concluded with it an agreement whereby the J.C.A. undertook to reorganise his Palestinian colonies.

In order to mitigate the manifold drawbacks and dangers of monoculture, the J.C.A. bought good arable land, specially adapted for the cultivation of cereals and other annual plants, in the immediate neighbourhood of the vine colonies, and divided this land among the colonists. At the same time, 352 vine planters were grouped into a syndicate known as the "Co-operative Society of the Great Cellars of Rishon-le-Zion and Zichron-Jacob." This syndicate took over the cellars, the existing wine and the claims, and was granted sufficient working capital to manage the whole business. A special company for the sale of the wine was formed under the name of "Carmel," with agencies in many countries; the Palestine Wine and Trading Company, of London, is affiliated to it. Measures were taken without delay for reducing production, so as to keep it always proportionate to sale; and in four years the production was reduced from 1,430,000 gallons to 528,000 gallons, that is to say, by about two-thirds. This result was obtained by uprooting hundreds of acres of vineyards and planting olives, almonds and oranges in their place. The sacrifice was heavy, but it met with its reward, and to-day wine-growing and the wine-trade are established on a sound basis and are one of the main sources of wealth in the country.

Between 1899 and 1908 the J.C.A. founded the new colonies of *Sedjera* (1899), *Mes'ha* (1902), *Melhamieh* (1902), *Yemma* (1902), *Bedjen* (1905), *Atlit* (1907), *Kinnereth* (1908), and

Mizpah (1908).

In all these colonies the J.C.A., by a wisely conceived administration, which aimed at making the conduct of affairs pass gradually into the hands of the colonists themselves. strove to awaken the spirit of initiative among the settlers and to develop their best energies. But, although the J.C.A. succeeded to a great extent in these educational efforts, the atmosphere of bureaucratic philanthropy in which its work and that of the Baron had necessarily been carried on had deeply affected the morale of the colonists. Their own helplessness in face of threatening disaster and their entire dependence on help from without had destroyed their confidence in themselves and weakened their will and their power to pull through in bad times. The necessity of remaining at all costs on good terms with the agents through whom financial help was doled out produced an unhealthy atmosphere of servile obedience on the one side and of a somewhat autocratic favouritism on the other. Under the influence of the short period of relative prosperity through which they had passed a prosperity not earned by their own efforts—the lofty idealism that had bid the colonists emigrate to Palestine fifteen or twenty vears before had largely vanished and given place to more materialistic tendencies; their whole outlook had undergone a considerable change, and instead of bringing up their children on the land, and in such a way as to make them Palestinian farmers, many had begun to send them to the numerous schools which the Alliance, the Hilfsverein der Deutschen Juden and the Anglo-Jewish Association were creating in the towns, and where an education given in French, German, or English was preparing the young generation for future emigration to European or American countries. In short, whilst the immediate material situation of the colonists had been greatly improved, the future of the national settlement was being gravely imperilled: on the one hand by the tendency to emigrate, which was fast spreading among the young; on the other hand, and in a much more dangerous manner, by the changes which had taken place in the character, in the temperament and in the general spirit of the colonists. The outlook was dark indeed, when the Zionist Organisation appeared on the

This Organisation, founded in 1897 by Theodor Herzl, established in 1908 the farm of *Kinnereth* on the shores of Lake Tiberias. In 1909 the planting of a great forest of olive-trees on lands bought by the Jewish National Fund, at *Hulda*, was undertaken, and during the same year the colony of *Daganiah* 

was founded at the point where the Jordan flows out of Lake Tiberias. In 1910 a company of Zionist capitalists of Moscow bought a large site at Medidel (the ancient Magdala), on the western shore of Lake Tiberias, in order to attempt the cultivation of cotton and lucerne; at Ben-Shamen the Jewish National Fund began to plant another forest of olive-trees, while the Russian Society of the "Lovers of Zion" founded the little labourers' settlement of Ain-Ganim near the great colony of Petach-Tikwah; and during the same year, 1910, the Palestine Land Development Company, Ltd., founded with the support of the Jewish National Fund, began its operations of purchase and allotment of lands for re-sale to private individuals. In 1911 was established the colony of Merchavyah, on the estates of which a society, specially constituted with this object, started an interesting experiment in co-operative colonisation by labourers. In 1912 the Palestine Land Development Company and the Jewish Colonisation Association entered into an agreement under which they have jointly made several important purchases of land, which have not yet had time to be settled. And while all these new settlements were being formed, most of the old colonies were enlarged by fresh acquisitions of territory in their immediate neighbour-

The Zionist Organisation is responsible for the appearance of two factors of considerable bearing on the economic development of Palestine: first, the creation of the Jewish bank, the Anglo-Palestine Company, Ltd.; and, secondly, the beginning of the movement for repatriating in Palestine the Yemenite Jews of Southern Arabia.

A few years after the foundation of the Anglo-Palestine Company the Palestine Office of the Zionist Organisation was opened at Jaffa. Originally this office was intended to act merely as the agent of the Zionist Executive for the supervision of the organisation's colonisation work in Palestine. practice, however, the Palestine Office was led to assume responsibility for many different activities, some of which in other countries are fulfilled by the Government. The Palestine Office, indeed, soon acquired great prestige both with the colonists and with the Ottoman Government. The colonists became accustomed to invoke its intervention whenever they had an important matter to settle with the local or the central government authorities; and as a result of the repeated intervention of the Palestine Office on behalf of the colonists the authorities on their side have come to consider the head of the Office as the de facto representative of the Jewish population of the country. Considering that the whole inner administration of the Jewish colonies and the relations of the colonies with each other are conducted on the lines of the most complete local autonomy. it is easy to understand the great importance of the political rôle which the Palestine Office of the Zionist Organisation has come to play. The question whether the Zionist Organisation represents the Jewish masses at large exists to-day only in the countries of the Galuth; in Palestine this question has long since been settled, the official representatives of the Zionist Organisation having become, by tacit consent of the Jews and of the Government, the "porte-parole," or spokesmen,

of Palestinian Jewry as a whole.

The Palestine Office supervises also the colonising activity of the Jewish National Fund and the Palestine Land Development Company. It is unnecessary to dwell upon the many-sided activities of these two institutions. From the purely technical point of view some part of their work calls for criticism; but from the national point of view they have rendered invaluable services. The farms and plantations which they have created in Judæa, in Samaria and in Galilee have become centres of the revival, where the most ardent nationalist spirit is fostered. That spirit has communicated itself to the younger generation in the surrounding colonies, and from the children it has passed on to their parents, with the result that within a few years the whole atmosphere of the old colonies has undergone a fundamental change. The flame of national enthusiasm has been revived, scepticism has given place to hope and confidence in the future; the colonists have realised that they are no more the sad survivors of a premature and unhappy colonising experiment, but that they have become the pioneers, the vanguard of a world movement which has waited for its time, but which is now on the way, slowly but surely and irresistibly, to Zion. The consciousness that all the hopes of this world movement centre around that first nucleus of national life represented by our colonies in Palestine has penetrated the colonists with a deep sense of responsibility, and has restored to them the confidence in themselves which they had lost under the well-meant tutelage of their philanthropic protectors. It would take us too far to depict in detail how deep this change has gone and what important practical consequences it has already begotten; it is only necessary to mention the splendid revival of the Hebrew language in Palestine and the strong attitude which the colonists took up and the pecuniary sacrifices that they made in defence of Hebrew when, a few years ago, the German Aid Society for Jews (Hilfsverein) attempted to interfere with the normal course of the hebraisation of our schools. As to the staying qualities of the colonists, their power to resist difficulties, their will and determination to cleave to the land of our fathers at any price, these are qualities which are to-day beyond dispute. If proof were required, no argument could

be more eloquent than the fact that when Turkey entered the war in October, 1914, and the Turkish authorities gave the Jews belonging to enemy nations the option of becoming Ottoman subjects or leaving the country, many Jewish inhabitants of the towns and agricultural labourers left the

country, but not one colonist.

The spirit of which such facts are but isolated expressions has not remained confined to the colonists and workmen, but has pervaded all classes of Palestinian Jewry; and its intensity is such that willingly or unwillingly the non-Zionist institutions in the country, if they wanted their work to be successful, have had to adapt themselves to the spirit of the times. Not only in their methods of work, but in the very spirit in which their institutions are conducted, they have had to conform to the new demands. Many illustrations of this evolution might be given. The most remarkable, perhaps, is that furnished by the Agricultural School of the Alliance Israélite at Mikveh Israel. The writer still remembers how, in 1911, the language of instruction there was French, while as to the general tendency of the school the then director (who, by-the-by, was not an agriculturist) said himself: "The object of our school is to give the boys a practical education which will enable them to find a living in North America or in the Argentine." In 1914, a few months before the outbreak of war, and shortly after Baron Rothschild's visit to Palestine, a new director was appointed in the person of a well-known Palestinian Zionist, who is also a capable scientifically trained agriculturist, and he undertook without delay the systematic hebraisation of the school. Those who knew the previous attitude of the Alliance Israélite in these matters will be able to appreciate at its full value the importance of the change that has taken place in the moral condition of our Palestinian colonisation.

At the same time we have a most interesting phenomenon to note: whereas the essentially philanthropic system of colonisation practised by Baron Edmund de Rothschild and the J.C.A. had only brought to Palestine immigrants who possessed little or no means, the expansion of the Zionist movement led to the influx into Palestine of a large number of middle-class Jews from all parts of the world, resolved to find in the country an outlet for their energies and for the small or moderate capital which they brought with them. It may readily be imagined how powerful a factor for progress, in a country not yet industrially or commercially developed, was the arrival of such a population, determined to settle and support itself there at all costs and at its own risk.

The above brief historical sketch will show that the Jewish colonisation of Palestine is not the realisation of any plan

or system decided upon beforehand and uniformly applied everywhere; on the contrary, what the Jews have so far created in Palestine represents the result of a host of independent efforts, inspired by different and sometimes contradictory tendencies. Yet experience and local conditions have succeeded in introducing into these efforts a certain order and uniformity, thus leading to an intelligent collaboration, conscious of the identity of the aim in view. What have been the results of these multifarious efforts? What has been the influence of the Jews on the development of Palestine during the last few decades? What part do they

play to-day in the economic activity of the country?

In order to appreciate at its right value the work which the Jews have done in Palestine, it is necessary to bear in mind that the new Jewish settlement in that country offers certain peculiar features which make it difficult, if not impossible, for the student to classify it under any of the hitherto known and described types of colonisation. A people of shepherds and farmers driven from its home and scattered throughout the world, deprived by laws or by circumstances of the possibility of acquiring land and of following agricultural pursuits, has been forced, in order to preserve itself, to turn to commerce and to become a people of traders and of middle-Habit is second nature, especially with Semites, whose power of adaptation to varying external conditions probably exceeds that of any other race; and eighteen centuries of remoteness from the land have wrought deep-seated changes in the psychology of the Jewish people. The Jew has become estranged from the soil and from all that relates to it. only has he lost the simple tastes and ideals of the husbandman, but the equability of mind and the conservatism of the agriculturist—a conservatism which is valuable so long as it is moderate—have given place in the Jew to a restiveness, an impulsiveness, a certain spirit of speculation and adventure, which are incompatible with successful agricultural work. Here lie the deeper reasons of the failure of the various colonising experiments that have been made with Jews in the Argentine, in Brazil, and in the United States of America.

It is therefore especially interesting to note that not only has the Jewish colonising activity in Palestine proved a success, but that in that country it is precisely in agriculture more than in any other field of activity that the Jews have shown themselves important factors of progress. In order to convince oneself of this it is enough to compare the Arab plantations with those of the Jews. In a country where fodder, and, in consequence, cattle and manure, are scanty, the Arabs for centuries have practised a system of tillage which has seriously impoverished the soil; moreover, the yield of their

crops is very meagre. Thanks to a wise use of chemical manure and the cultivation of green manures, destined to restore to the land the fertilising elements of which the crops have robbed it, the Jews have succeeded in increasing the productive qualities of the soil to a marked degree; while, at the same time, the employment of adequate machinery has made possible modern methods of cultivation, and has enabled them to raise the produce of various crops to quite remarkable proportions. They have not yet achieved equal successes in all branches of agricultural work; the reason is that they have not yet had sufficient practice in certain of them. But in those agricultural undertakings in which they have had at least ten or fifteen years' practice, they have shown themselves equal to the most progressive farmers of advanced agricultural countries. The value of their work can best be judged by comparing the yields of their crops with the yields of the crops of the surrounding Arab inhabitants. With the Arabs the cereals (wheat and barley) yield an average gross produce of about £1 per acre; in the better Jewish colonies, the fields yield up to £2 and £3 and more. In Arab orange-groves 350 cases of oranges per acre are considered a very good average crop; Jewish orange-groves, as a rule, vield about 40 to 50 per cent, more, and in the last year before the war a yield of no less than 757 cases—that is, more than double the Arab yield-was obtained. Arab vineyards do not yield, as a rule, more than £6 to £7 value of gross produce per acre; the Jewish vine-planters obtain an average of £12 The milch cows of the fellaheen give an average of . 130 to 160 gallons of milk per annum; those of the Jewish colonies at Benshemen, Ekron, and Artuf give about 440 gallons and more. These figures are an eloquent testimony to the skill of the Jewish colonist. No doubt success or failure of the crops is in close dependence on external conditions such as the soil, the climate, the water supply. But these conditions are the same for the Arabs as for the Jews. We must, therefore, look to other factors for the explanation of the higher yields obtained by the Jewish colonists; and we may safely conclude that these factors must be sought in the character of the Jews themselves. Personally, the writer does not hesitate to ascribe the good results obtained to three qualities which are developed to a high degree in most of the colonists, namely, their manual skill, their businesslike methods. and their progressive (one might even say their scientific) spirit. As a proof of the superior manual skill of the Jewish agricultural labourers, it may be mentioned that, in the course of the last few years, Arab landowners have repeatedly entrusted Jewish labourers with the creation of new plantations, and especially with the execution of such delicate work as

the pruning and grafting of their fruit-trees. Of the businesslike methods of the settlers no better proof is required than the fact that on the one hand the importation of chemical fertilisers, of wood for packing-cases, of paper for wrapping oranges and lemons, and of various other kinds of raw materials, and on the other hand the exportation of all the important agricultural products (wine, oranges, almonds) are carried on by the colonists themselves by means of co-operative societies specially created for the purpose and represented on the chief European markets by their own agents chosen from amongst the members. But most of the success of the colonists is due probably to their typically Jewish perspicacity, which enables them to grasp at once the cardinal points of a problem, and to their progressive spirit, which impels them not to content themselves with half-measures, but to go straight for such methods as will promise them a radical solution of the particular difficulty with which they are confronted.

Practical illustrations of this progressive and scientific spirit are met with in Palestine at every step. In place of the primitive Arab chain-pumps, which are set in motion by a camel or a mule that walks round and round with its eyes blindfolded, the Jews have introduced modern pumps, worked by oil or gas motors, for the irrigation of their orange and lemon groves, and on the banks of the River Audja, not far from the colony of Petach-Tikwah, a Jewish company, in 1913, instituted great waterworks, which, on payment of a certain tax per dunam (the Arab unit of land-measurement), furnish the surrounding planters with the water necessary to

irrigate their soil.

In order to remove the stagnant pools which breed fevers, the Jews in various places have planted clusters, great and small, of eucalyptus trees, which have done much to make the country more salubrious, and at the same time supply

timber that may be turned to divers uses.

The struggle against the foes and parasites of their crops has received constant attention from the Jewish settlers, and in this struggle they are assisted by the various scientific institutions of the country. The Jewish Health Bureau of Jerusalem supplies them with the microbe cultures necessary for the destruction of the rats which ravage the cereal crops; and the Jewish Agricultural Experiment Station at Zichron-Jacob, as well as the technical staff of the Zionist Organisation's Palestine Office, furnishes inquirers with all instructions as to the means of combating the insects that do damage to fruit-trees.

In order to encourage cattle-breeding, the Jewish bank, the Anglo-Palestine Company, grants credits for the purchase of dairy cattle on the joint guarantee of a certain number of settlers; while the Jewish National Fund, on its farm of Ben-Shamen, gives demonstrations in dairy-work and in the cultivation of fodder. A model poultry-farm has also been established at Ben-Shamen, to instruct the colonists in the

best methods of rearing poultry.

The question of theoretical and practical instruction in agriculture, both for children and for the settlers themselves, has always received attention from the various Jewish organisations in Palestine. The agricultural school of Mikweh-Israel is engaged in the technical preparation of young people; the Palestine Office of the Zionist Organisation publishes a monthly agricultural journal, and keeps a travelling lecturer, who goes round the various colonies giving lectures and practical demonstrations; the Jewish Agricultural Experiment Station has instituted holiday lectures for teachers in the colony-schools. In 1912 the colonists, partly subsidised by the J.C.A., sent a delegate, a graduate of a horticultural school, to the United States in order to study the best agricultural methods practised in California, Texas, and Florida. In 1914 there was founded at Mikweh-Israel the Palestinian Agricultural Society, which includes among its members a fair number of agronomists, agriculturists, and horticulturists who are graduates of various European colleges, and also the best practical farmers of the country. The object of this society is to improve agriculture and kindred industries.

But the most important event for Palestinian agriculture has undoubtedly been the creation of the Jewish Agricultural Experiment Station, founded and maintained by the munificence of a group of American Jews, with the main object of introducing and improving the cultivation of varieties of cereals and other plants which are not very exacting and have an ample power of resisting bad weather, disease, and various parasites. The offices and the laboratories of the station are situated in the colony of Zichron-Jacob; its fields for experiments and demonstration are at Atlit, on an estate of 112 acres given by the Jewish National Fund. The Jewish Agricultural Experiment Station commenced its labours in the summer of 1910. Among the results of its still brief career we quote below a few, which will illustrate the great significance of this institution for the economic development of Palestine and for the study of its agrological conditions.

The Jewish Agricultural Experiment Station has succeeded in isolating, and is in the act of fixing, a new form of sesame, the yield of which, other things being equal, is more than double that of sesame ordinarily grown in the country. It has also created five species of wheat and barley, which show an amazing power of resistance to the sirocco, and some species of wheat, peculiarly rich in gluten and accordingly lending themselves specially to the manufacture of macaroni.

Every year, from the end of July to the end of October, Egypt imports about £80,000 worth of table grapes, which come exclusively

from Smyrna and Cyprus. The Experiment Station has succeeded in acclimatising in Palestine a variety of table grape ripening three weeks earlier than the precocious varieties of the region, and accordingly capable of appearing three weeks earlier on the Egyptian market.

The Experiment Station has supplied valuable information as to the best varieties of olives for planting purposes, showing, by means of numerous analyses made in its laboratories, that the olives of Palestine, especially those of Galilee, are superior to foreign olives, both in

the average weight of the fruit and in quantity of oil.

The Experiment Station has undertaken the cultivation and improvement of various species of indigenous spineless cactus, which may supply valuable fodder for cattle. It has also discovered a new method of growing the mulberry-tree, thanks to which this tree is in leaf three weeks before the normal time—a phenomenon of great importance for

the rearing of silkworms and for the feeding of cattle.

The Experiment Station cultivates more than forty varieties of plants designed to keep the dunes from shifting (this shifting constitutes one of the main obstacles to agriculture along the Mediterranean coast), and rapidly to provide efficient shelter against the salty winds from the sea. It has also introduced more than forty species of eucalyptus, several of which are specially adapted to the chalky soils which form the greater part of the cultivable land of the country.

As regards geology, the Experiment Station has brought together the most complete collection which exists for Palestine. Its investigations into the tertiary strata have aftered the geological map of Palestine, and have profoundly modified previous theories as to the structure

of the soil.

The collection of fresh-water molluses is one of the richest in the world. The cryptogamic and phanerogamic herbaria each contains nearly 30,000 species; the latter, in particular, contains a fairly large number of hitherto unknown plants.

While so much attention has been paid to the development of the technical side of agriculture, the colonists have not neglected the business organisation of the sale of their products. We have already mentioned that they have formed great co-operative societies for the expert and sale of the products of their plantations.

No argument can show in more striking fashion the economic importance of the Jewish agricultural colonisation of Palestine

than the following statistics:

(a) Thirty per cent. of all the oranges and 90 per cent. of the wines which leave Palestine by the port of Jaffa are supplied by the neighbouring Jewish colonies, and oranges and wine by themselves represent nearly half the value of the total exports from Jaffa. On the other hand, most of the Jewish plantations are still in their infancy, and will not become fully productive for some years.

(b) In 1890 an acre of irrigable land in the colony of Petach-Tikwah cost about £3 12s.; to-day such land would not cost less than £36 per acre.

(c) About 1880 the lands which form this same colony were uncultivated, and only brought in a few pounds in revenue to the State; in 1912 the value of the annual production in the colony was £36,000, and the Government drew a revenue of £3,400 from part of the land (since a great deal is not yet cultivated, or has been planted quite recently and does not yet yield any produce).

(d) In 1880 the value of the colony was less than £1,200; to-day it represents a value of at least £600,000, and its population numbers

3,000 souls.

Industry in Palestine can as yet show but a rudimentary development. The main cause of this is the inland duties, which until 1910 were levied on goods conveyed from one province to another. If we remember that these inland duties once rose as high as 8 per cent., and, on the other hand, that the only duty on imported goods is one of 11 per cent., we can realise that conditions have been very unfavourable to the creation of new industries in the country or for the improvement of those already existing. Nevertheless, the Jews have instituted several mechanical workshops of some importance in Palestine; they have established some modern which, by improved chemical processes, in extracting as much as 10 per cent. of oil from the residues left by the primitive Arab oilworks. The production of wine and brandy is one of the most important branches of their activity; and for the requirements of their great wine-cellars they have created the coopering industry in Palestine. have commenced, on a small scale, the distilling of essential oils—in particular, essence of geranium and thyme. The Jews do more architectural work than any other section of the inhabitants; a large number of them are engaged in the building industry, and, in particular, the manufacture of cement-stones is almost entirely in their hands.

But it is in efforts for the creation and extension of home industries that the Jews have shown their greatest activity. In their school of arts and crafts known as "Bezalel," they have instructed 500 pupils in the weaving of Oriental carpets, in the inlaying of copper with silver—an art much admired in the East, in the manufacture of silver filigree ware, in ivory-carving, &c. In their mother-of-pearl workshop they teach the manufacture of buttons and of various devotional objects. At Jerusalem they have established a professional school comprising workshops for carpentry, machinery, iron-smelting, and weaving, as well as a smithy and a dye-shop. Among the poor families of the same town they have distributed a large number of knitting-machines, the cost of which is repayable by small annual instalments. In all the important towns schools for girls and women have been founded to instruct them in the manufacture of a special kind of Oriental lace.

The foreign trade of Jaffa amounts to nearly 40 per cent. of the entire trade of Palestine. This trade, which in 1904 was valued at £760,000, had in 1912 already reached the figure of £2,080,000,\* the imports being markedly superior to the exports. If we merely take the oranges and wines exported by the Jewish settlements, we shall find that they alone represent nearly 25 per cent. of the total exports from Jaffa. If, again, we remember that the greater part of the imports is received

<sup>\*</sup> C. Nawratzki: "Die Jüdische Kolonisation Palästinas."

by Jewish firms, we can form a fair idea of the important part played by the Jewish population in the trade of Palestine.

This importance is strikingly apparent in the part played throughout the country by the Anglo-Palestine Company.

Founded in 1903, this bank began its operations in Palestine the same year. The original capital was £39,000; it has been raised to £100,000. The Anglo-Palestine Company has its head office in Jaffa, with branches at Jerusalem, Haifa, Hebron, Beyrout, Safed, Tiberias, and Gaza, and agencies in the principal Jewish colonies.

Starting from the principle that the credit which may be allowed to a borrower is not always determined by the object which serves as the basis of credit, but often—and this is particularly the case in the East by the debt-collecting ability which the lender can show when payment falls due, the Anglo-Palestine Company has succeeded in organising in Palestine a modern system of credit. It has introduced short-term credits against the deposit, as security, of goods or bills of exchange. In order to facilitate the granting of credit to farmers, labourers, and small tradesmen, the Bank has instigated the formation of co-operative credit societies, based on the joint guarantee of the members. At the end of 1913 there existed fifty-two of these co-operative societies, containing 2,289 members in all, and possessing at the Anglo-Palestine Bank security deposits amounting to upwards of £4,000.

To replace the system of credit on mortgage, which practically does

To replace the system of credit on mortgage, which practically does not exist in Turkey, the Anglo-Palestine Company grants long-term credits, the redemption of which is guaranteed by the crop where plantations are concerned, or by rent where houses are in question.

The deposits received by the Bank are very considerable, and their importance is rapidly increasing. This is the best proof of the great confidence with the Anglo-Palestine Company enjoys, in spite of the fact that the 4 per cent, interest which it pays for these deposits is comparatively small for Eastern conditions. The business transacted shows a slow but steady advance, although for the last few years, owing to a slow but steady advance, although for the last few years, owing to various political complications, the general economic situation has not been very favourable. In 1910 the turnover was £5,840,000, and since then the figures have become even larger,

From what was said at the outset of these remarks on the trade of Palestine it will be seen that the extraordinary economic progress of Jaffa corresponds almost exactly with the period when the Jews began to interest themselves more actively in Palestinian economy, and, above all, when the Zionist Organisation, by founding the Anglo-Palestine Company, began its operations in the country. It would be too much to say that the credit for this great economic progress belongs exclusively to the Jews, but it is probable that they have been the most important factor. An impartial eyewitness, the British Vice-Consul, in his report of 1900, says: "There can be no doubt that the establishment of the Jewish colonies in Palestine has brought about a great change in the aspect of the country, and an example has been set before the native rural population of the manner in which agricultural operations are conducted on modern and scientific principles." Again, in his report of 1904, the Acting Vice-Consul records: "There has been a marked increase in the population of

Jaffa, specially in the Jewish element, which is spreading all over Palestine, and which represents to-day the most enter-

prising part of the population.

It is a very significant fact that the immigration of the Jews into Palestine, with the sole exception of that of the Yemenites, represents an entirely spontaneous movement. Their return to the land of their ancestors is not incited by any propaganda; no one pays their travelling expenses. It is on their own initiative and at their own expense and risk that the Jews return to Zion; nor do the various Jewish organisations begin to interest themselves in them until they have set foot on Palestinian soil. Thus the field of activity for these organisations is strictly confined to Palestine itself, no share of their attention or of their financial means being distracted by outside work. On the other hand, by a sort of tacit agreement, each of the organisations has set apart for itself a certain group of activities in which it has specialised, and in the execution of which it has reached a high degree of perfection. It is thanks to this limitation and division of labour that, while disposing only of modest financial resources. the Jews have been able to render substantial aid both to rural and to urban colonisation.

Let us examine, in the first place, what has been done for

rural colonisation.

The soil of Palestine, for the most part, either belongs to big landowners or is the joint property of village communities; it is therefore difficult to purchase such small lots as single families need. Moreover, the formalities for buying and selling land are somewhat complicated. In order to meet these drawbacks and to facilitate the purchase of small holdings by private individuals, the Zionist Organisation has formed a special instrument, the Palestine Land Development Company, Limited. This society purchases on its own account large sites, which it improves, makes healthy, and divides into lots to be resold to private persons. It undertakes similar operations on behalf of the individuals themselves; it takes upon itself the management of the holdings whose owners live abroad; it is also charged with administering the domains belonging to the Jewish National Fund.

As regards the immigrants or inhabitants who wish to devote themselves to agriculture, but, though not entirely devoid of means, do not possess sufficient capital for setting

up a farm, two cases may arise:

(a) If they have some knowledge of agriculture, and can prove that they possess a capital of about £200, the Jewish Colonisation Association offers to sell them suitable holdings of 250 dunams (about 56 acres) each, and, if they so desire, builds them a dwelling-house and stalls for the cattle, the whole outlay being repayable in forty years by small annual instalments.

(b) If their means are very limited, the Odessa Committee\* places at

their disposal, in one of the labourers' colonies which it has founded in the immediate neighbourhood of the great agricultural centres, small holdings for which repayment can be made in a certain number of years. Such a holding comprises, besides a cottage large enough to house a family, 10 dunams (about  $2\frac{1}{3}$  acres) of irrigable land. The produce of this holding assures the holder a certain income, but the cultivation allows him spare time in which either he or his wife or children can work as labourers in the big neighbouring colony.

Finally, colonists already settled who need money, either for continuing their labours or for enlarging their holdings, can obtain loans from the Anglo-Palestine Company. But the rate of interest which this Bank must levy for its loans is a burden less easily borne by agriculture than by commerce; and the formation of a special agrarian credit in Palestine would be a great boon for agriculture in general and would give a powerful impetus to Jewish rural colonisation in

particular.

The question of manual labour in these rural colonies has also received close attention from the principal Jewish organisations. We have already mentioned the labourers' colonies founded by the Odessa Committee. The colonisation society "Esra" contributes towards lightening the existence of the Jewish agricultural labourer by building cheap and comfortable homes for the families and "workmen's homes" for the bachelors. But, above all, the Jewish National Fund has taken a most lively interest in this question. In various colonies it has erected "homes" and co-operative kitchens for the bachelors, and cheap houses for the families; it has established farm-schools where the newly-arrived labourers can take a course in practical farm-work; it has also encouraged and regulated the return to Palestine of a large number of the Arabian Jews of Yemen.

For a long time the Jews of Arabia had led a happy and prosperous life. But at the beginning of the nineteenth century the Arabs began to be hostile to them, and in the course of the last few generations persecutions of all kinds have reduced their community, once large and wealthy, to a tribe numbering some few tens of thousands. Realising the value that this completely Arabised tribe, accustomed to the climate and very modest in its requirements, might have for our colonising work, the Jewish National Fund senterpresentatives to Yemen in order to preach and organise the return of the Jews to Zion. The Yemenites responded to the appeal with great enthusiasm Within the last ten years six thousand of them have returned to Palestine, where the Jewish National Fund settles them in the immediate neighbourhood of the great Jewish agricultural centres, each

<sup>\*</sup> This committee is to-day the official representative of the older colonising Associations of various Russian towns.

family receiving a small house with a bit of good agricultural soil. The whole family works in the settlement—the men as labourers, the women likewise as labourers or as servants in the colonists' houses, and even the children do light work in the fields. Their various earnings, combined with their income from the small bit of land, ensure a livelihood for the Yemenite's family, and even allow him to save enough to repay to the Jewish National Fund the net cost of his house and of his holding; in fact, the instinct of proprietorship is well developed among the Yemenite Jews, and a large number of them are already owners of their little houses. The Yemenite labourer is usually intelligent and skilful; his mind is very malleable and open to progressive ideas; his physique, sorely tried by his miserable life in Yemen, is visibly improving in Palestine. The Jewish National Fund, by its efforts to settle the Yemenite Jews in Palestine, is accomplishing a task of capital importance for the agricultural development of the country.

We must also note the beneficent activities of the Union of Jewish Women for Cultural Work in Palestine, which has established at Kinnereth, near Lake Tiberias, on lands belonging to the Jewish National Fund, a domestic agricultural school where Jewish girls are taught to become good farmers' wives.

There are to-day altogether about 50 Jewish colonies with a population of about 15,000 souls. They cover a total area of 110,000 acres, which represents nearly 2 per cent. of the entire area of Palestine, but 8 to 14 per cent. of its cultivated surface.\* The soil of Palestine is, in fact, very badly utilised; only a very small part is under cultivation. Moreover, east of the Jordan there are immense territories, almost uninhabited, the soil of which is excellent arable land. These lands, thanks to the Hedjaz railway which crosses them, possess very good communications with Asia Minor, the Mediterranean, and the Red Sea. This country, which to-day contains merely a few hundred thousand inhabitants, supported ten times that number during the first centuries of the Christian era, and was then considered a granary of the Roman Empire. It only needs an industrious and intelligent population in order to recover its pristine fertility, and to regain its old economic importance. The same observation applies to the southern part of Western Palestine, and in a certain measure even to the mountainous lands which constitute the central part of the country. Everywhere there is still room for a dense population. The present total population of Palestine is nearly 700,000 souls; this figure represents only 15 per cent. (according to Reclus), or even 10 per cent. (according to Colonel Conder), of the population which it supported in the

<sup>\*</sup> C Nawratzki, op. cit.

days of its prosperity. Careful calculations based on a comparison between the density of population of Palestine and that of other countries with similar natural economic conditions, on the area of available agricultural lands, and on an estimate of the total quantities of foodstuffs and raw materials which Palestine should be able to produce under good management, authorise the conclusion that the country, if skilfully administered, should be capable of supporting a population of at least five to six million inhabitants. It will be seen, then, that there is no ground for fearing that by the increase of Jewish immigration we shall ever inconvenience the Arab population; on the contrary, 5,000 Arab labourers are to-day working in the colonies of Judæa alone; and the more our settlements grow in number and area, the greater will be the number of Arab labourers who will be able to find in them remunerative employment.

The development of the agricultural colonies depends to a great extent upon the development of the towns in the neighbourhood of which these colonies are situated, for it is the towns which form the only possible market for numerous agricultural products (milk, butter, cheese, eggs, vegetables, certain fruits) which will not keep long, and must therefore be quickly consumed; while for products that will keep for some time the coast towns are the indispensable centres of export. Thus, urban colonisation has received from the various Jewish organisations all the encouragement that they

were in a position to give.

The twofold economic rôle of the towns, as centres of consumption and of export, cannot be properly fulfilled unless they have a population possessing, on the one hand, sufficient refinement in its material needs and the financial means for satisfying them; and, on the other hand, enough capital for carrying on trade. But such a population has certain requirements, and among the Jewish middle classes, with whom we are dealing here, these requirements may be summed up under two heads—a comfortable dwelling, and the opportunity of giving their children a good education. Thus, the various Jewish organisations have realised that, to facilitate the immigration of middle-class people desirous of settling in the towns of Palestine, they must direct all their efforts towards securing these two desiderata. Thanks to the support of the Jewish National Fund, which, through the Anglo-Palestine Company, has consented to make them the necessary loans, societies have been formed for the erection of modern quarters in the most important towns. The first and largest of these quarters was founded at Jaffa, and was called "Tel-Aviv"; it presents quite a European picture, and its broad, well-kept streets, and its houses surrounded with little gardens, form a striking contrast to the Arab portion of the town. "Tei-Aviv" means "Hill of Spring"; the whole quarter breathes a spirit of health, order, and joy. A Jewish local administration, entirely autonomous, has enabled the inhabitants to obtain a measure of comfort and hygiene unimaginable in Jaffa itself; and even such details as the periodical inspection of antiseptics, with which barbers are compelled to disinfect their instruments, show the unceasing vigilance of an administration that is solicitous for the welfare of its citizens.

The schools of Tel-Aviv are numerous and well-organised; there are kindergartens and primary schools, a secondary school for girls, a training school for female teachers, a grammar school with 27 teachers and 600 pupils (400 boys, 200 girls), and a school of music with 90 pupils; in all these institutions, without distinction, the language of instruction is Hebrew. There is a public library, together with literary, scientific, musical, and dramatic societies, and a gymnastic club.

Tel-Aviv is growing every day; and similar urban quarters provided with the same conveniences are being built in the other large towns, in Jerusalem and Haifa. At Haifa, on the slopes of Mount Carmel, a new quarter is being built round the nucleus formed by the future Jewish Institute for Technical Education in Palestine; while on the Mount of Olives, looking westwards towards the place where once stood the Temple of Solomon, and eastwards towards the Jordan, the Dead Sea and the blue mountains of Moab, the Jewish National Fund recently bought a site on which the Jewish University of Jerusalem will be erected in the very near future.

Thus, the difficulty of giving the children a good education—a consideration so important for members of the "people of the Book"—has already ceased to be an obstacle to the immigration of well-to-do Jewish classes. The existing schools, on the whole, meet even exacting requirements, and in point of fact for some years past a growing number of well-to-do families has come to the towns of Palestine, to swell the valu-

able element of traders and consumers.

One of the most interesting points about Jewish life in Palestine is the entire administrative autonomy of the colonies. Each of them is administered by a "Waad," or Council, which represents it in outside relations, and particularly before the authorities of the Ottoman Government, and also directs all its internal affairs. The Council is elected every year by the General Assembly of the inhabitants, the right to vote being exercised by all, men or women, who possess holdings of land registered in their own names in the books of the colony as well as by all who, without being landowners, have been living in the colony for at least two years and pay taxes regularly. The Council registers owners of

real estate, as well as births, marriages, and deaths. It is assisted in its labours by several committees. A Valuation Committee helps it to distribute among the inhabitants. according to the income and the family burdens of each, the total amount of taxes to be paid to the Government, as well as the internal taxes which are needed to supply the colony's budget. An Education Committee directs the working of the communal schools and of the kindergartens. A Committee of Public Security organises and supervises the police service; a certain number of colonies, by annual contracts, entrust this service to the force of Jewish watchmen known as "Hashomer." An Arbitration Committee settles the disputes arising between the colonists themselves, and often between the colonists and their Arab neighbours; for it is interesting to observe that the reputation for ability and impartiality of the Jewish arbitrators stands very high among their Arab neighbours. The Council concerns itself with public hygiene, which comprises the maintenance of the doctor, the chemist, and in some cases of the hospital nurse; it administers the water supply, the public baths, and the upkeep of the streets; it controls the quality of certain necessities of life, such as bread. Special committees deal with questions of charity, etc.

Recognising the advantages of autonomous local administration, the Jews naturally take upon themselves and faithfully carry out all the duties which this system involves. Nevertheless, among these duties there is more than one that more properly belongs to the central government. Thus, if order and security were better established in the country, the colonies would not have to spend on their rural police service the enormous sums which they devote to it at present. For instance, in Rechoboth, a colony of 900 inhabitants, this service alone costs £1,000 a year. Fortunately, for some of their expenses, such as schools, doctor, chemist, and hospital nurse, certain colonies receive subsidies from the various Jewish

organisations which have already been mentioned.

As in the case of the rural police service, the Government's indifference towards sanitary conditions has compelled the Jews themselves to take the necessary measures. In the country the large uncultivated areas and the numerous marshy localities; in the towns the terrible distress of the poor, their unwholesome food and unhealthy houses, and, above all, the absence of suitable drinking-water—these are the factors which play an essential part in the propagation of two great Palestinian scourges, malaria and eye diseases. In order to fight malaria in the settlements, the Jews have planted millions of eucalyptuses, and these trees, through their great power of absorption and evaporation, have brought health to many places that were formerly marshy and uninhabitable. In the

towns the Jewish Health Bureau of Jerusalem, maintained by the American philanthropist, Mr. Nathan Straus, and the Society of Jewish Physicians and Naturalists, undertake the struggle against malaria and eye disease; and under the central direction of this institution the local doctors in certain Jewish colonies have undertaken a systematic war against trachoma. Jewish hospitals exist in all the important towns (four at Jerusalem, one at Jaffa, one at Haifa, one at Safed, one at Hebron); at Jerusalem there are an ophthalmic hospital, a large house of refuge for the aged, an institute for the blind, and a lunatic asylum. In all colonies of any importance there are a doctor and a chemist, and many of them possess an

infirmary.

But there is one domain in which the Jews, perhaps even more than in the cases above-mentioned, have found themselves compelled to carry out works of public utility which should properly have been accomplished by the Government—that is. the improvement of means of communication. In Palestine. where, railways being scarce, much travelling is done by carriage and goods are transported almost entirely by camel or by waggon, roads form one of the vital nerves of the economic organism of the country. Yet perhaps no question receives so little attention from the Government as the construction and maintenance of these precious means of communication. Since the rapid agricultural development of the Jewish colonies and of the lands which surround them has necessitated the existence of a network of good roads to connect them with one another and with the towns, the Jews have found themselves obliged to undertake the improvement of the existing highways and the construction of new ones. Thus, they have improved and still maintain the road from Jaffa to Tel-Aviv; and at their own expense they have built excellent new highways of macadam, which in Judæa connect Rechoboth with Wad-el-Chanin, Wad-el-Chanin with Rishon-le-Zion, Rishon-le-Zion with the road from Jaffa to Jerusalem, and in Galilee Poriah with Kinnereth, and Rosh-Pinah with the shore of Lake

The general impression which emerges from the facts set forth above seems to be that the Jews, in all their activities in Palestine, have shown themselves to be conscientious and skilful administrators. With limited means, and without any support from the local government—nay, often in the face of its frank ill-will—they have succeeded within a generation in setting up a colonial organisation which for the country as a whole is a most powerful leaven of progress. It is true that they may have derived many valuable and instructive hints from the experience of the great colonising nations of Europe, and that the high average of intelligence and the progressive

spirit shown by the farmers and other Jewish immigrants have notably lightened their task; but the grand secret of their success lies in their two-thousand-years-old longing for Zion, in their passionate love for these plains and mountains which saw the growth and flowering-time of their race, in that fierce idealism which makes them cling to the soil of Palestine, ready to fertilise it with their sweat, and to suffer the direct privations and the cruellest martyrdoms rather than be forced to leave it a second time.

Provided that the Jews are allowed to continue their labours in peace, they will succeed in restoring to Palestine its old prosperity, and even more. They have the necessary will and aptitude; they will find the necessary means. The general economic situation is favourable, and presages a speedy revival for the country; but does the country possess in itself the materials that are indispensable for this revival? We affirm that it does, and the proofs of this statement will form the

conclusion of the present study.

The legend goes that the soil of Palestine lacks natural fertility, and that the water supply is not sufficient to make intensive cultivation possible. The fact is that the soil of Palestine, to-day as in ancient times, is remarkably fertile for one who takes the trouble to work it. Apart from a few unimportant exceptions, every foot of land can be utilised Along the Mediterranean shore the plains for agriculture. run side by side, each richer than the preceding one. First, in the south, comes the plain of Gaza, where the barley for brewing is better than at any other spot in the world; then, towards the middle part of the coast, round Jaffa, lies the great plain of Sharon, with its soil of clay and chalk, covered with orchards of orange-trees and almond-trees; to the north are the plain of Esdraelon, whose soil, of basaltic origin, rich in humus, is famous as in days of old for its abundant crops of sesame, and the plain of Beisan, famous for fields of wheat. The limestone hills of Judæa and Samaria were covered in biblical and Roman times with artificially raised terraces of fertile earth maintained by low stone walls and irrigated by means of the rain-water collected in natural pits or rockhewn cisterns; thanks to these terraces, the whole of these mountainous regions must have been one uninterrupted stretch of orchards and gardens. Since then, through neglect on the part of the inhabitants, the terraces have been allowed to be destroyed, and the fertile soil of the hills has been washed away. To-day only a very limited number of vineyards and orchards of olive and fig trees exist in the mountains of Judæa. But the restoration of the terraces, which we shall undertake, will undoubtedly turn even these barren rocks once more into "a land flowing with milk and honey." In the so-called

"desert of Judæa," which is in fact a steppe and not a desert, numerous flocks of sheep and goats find, even in the dry period of summer, a natural pasturage that suffices for their needs. The valley of the Jordan, a gigantic natural rift whose southern portion lies 1,200 feet below the level of the Mediterranean Sea, and which is protected by high mountains both on the east and on the west, owes to these circumstances a climate similar to that of Nubia, and a very rich tropical flora. Finally, beyond the Jordan, there stretch to the south the steppes of Moab, well suited for the breeding of sheep on a large scale: farther to the north the highlands of Gilead, with their forests of oak and pine and numerous herds of eattle; and still farther to the north the great fertile tableland of Hauran, renowned for its fields of wheat.

So much for the quality of the soil. As for the moisture necessary for vegetation, the annual average rainfall (20 to 28 inches) is equal to that of Central Europe; the difference is that all this quantity of water falls within the space of six months, there being no rain between April and October. But this uneven distribution has been met since very ancient times by the construction of cisterns for storing the water from the winter rains; and to-day, with modern appliances, it would be possible to construct large dams for the same purpose in all the mountainous parts of the country.

The six rivers of the Plain of Sharon, and the two of the Plain of Esdraelon, carry water all the year in the lower part of their courses, while the Jordan and its various tributaries, and the Lake of Tiberias itself, would suffice for the irrigation of all the great Valley of the Ghor, which extends for 84 miles from Lake Merom to the Dead Sca. In Galilee, in Gilead and in Jaulan there are numberless little rivulets and springs which could profitably be used for various agricultural purposes. And in the whole coastal plain one needs only dig to a depth of 10 to 80 feet in order to find aquiferous strata which would furnish water for irrigation in quantities sufficient to convert the whole of Philistia and Sharon, that is from Gaza to Haifa, into one great irrigated garden. Finally, the dew itself is so abundant during the summer nights that it is equivalent to a light rain, and furnishes the vegetation with enough moisture to ripen the summer crops, to supply the needs of non-watered trees (olives, figs, almonds, vines), and to maintain on the pastures of the "desert of Judæa" the grass required by the numerous flocks of sheep and goats.

Thus to an impartial scientific examination Palestine reveals itself as a country of great fertility, though this fertility is often latent, and demands certain efforts before it can be called into play. The great differences of height and of climate in the different parts of the country make it possible

to cultivate side by side the products of the temperate and of the torrid zones. It is the same with the rearing of domestic animals, which is also susceptible of great development; the Arab thoroughbred, the mule, the caracul sheep of Turkestan, and the ostrich might be bred with considerable profit.

In the sphere of industry the possibilities of development are no less notable. The manufacture of oil and soap is supplied with raw material by the plantations of olives, almonds, and castor-oil plants, and by the cultivation of sesame, ground-

nuts, and cotton.

The extraction of essential oils and the manufacture of perfumes will find abundant raw material in orange-peel and lemon-peel, in the blossoms of geraniums, orange-trees, and roses, as well as in those of the spiny acacias, used all over Judæa for the construction of quickset hedges, and of the wild thyme which abounds at the foot of the mountains of Judæa.

The manufacture of wine, brandy, and raisins is dependent on the cultivation of the vine, and is still susceptible of great

development.

Cereals furnish the raw material for milling, starch-making, and the manufacture of macaroni; milling in particular has a future before it, as the country annually consumes £80,000

worth of foreign flour.

Every year Palestine imports, via Jaffa, nearly £80,000 worth of sugar. Now, in the whole coastal plain, and above all in the Jordan Valley, the sugar-cane thrives excellently, while the Plain of Esdraelon and certain parts of the coastal plain possess very suitable soil for beetroot. Hence the sugar industry seems to possess every chance of success; it would have the great advantage of giving valuable residues as food for cattle (beetroot slices) or as manure (bagasse of cane).

The manufacture of preserves might profitably utilise the olives and the numerous vegetables and fruits of the country; and when the fishing industry acquires the economic importance which is its due in view of the great length of the coastline, the possibility of obtaining fish and olive-oil simultaneously and cheaply will involve the manufacture of fish preserves, the residues of which (fish offal) form an excellent manure, valuable for a country where dung is scanty.

valuable for a country where dung is scanty.

In Palestine, where tobacco grows easily and is of good quality, the cigarette industry should yield at least as good results as in Forms, where all the tobacco is imported.

results as in Egypt, where all the tobacco is imported.

Papyrus, which grows wild and in considerable quantities throughout the Jordan Valley, but above all 'in its upper portion, might well furnish the raw material for the manufacture of certain very fine kinds of paper.

Jaffa annually imports more than £240,000 worth of woollens,

and exports large quantities of sheep's and camel's wool. Cannot the spinning industry find in the country both its raw material and a ready market? Tanning might profitably be developed. Palestine exports a large number of hides, and imports leather. The country itself possesses good tanning materials, such as Sumach, Shinia, and Acacia mollissima which the Jewish Agricultural Experiment Station has introduced, and the bark of which is rich in tannin of admirable quality.

To pass to a different sphere, the building industry, whose importance grows from day to day in consequence of the immigration of the Jews in particular, is certainly destined to make great strides. Already the manufacture of cement stone has acquired a certain importance. The cement which is used is imported from abroad; and yet in Palestine, in favourable spots, we find the material necessary for making

cement.

The utilisation of the mineral wealth of the country might also form the basis of a large number of industrial enterprises. The Dead Sea and the important beds of Hasbeya produce asphalt of a superior quality. Throughout Transjordania, and notably near Es-Salt, we find numerous beds of phosphate. The water of the Dead Sea, which contains 24·46 per cent. of salts, and its deposits, are rich in potassium and bromides. Petroleum probably exists at various points in the country. In the region of Sidon there are strata of iron ore, red and yellow ochre, and coal. Important deposits of chalk and plaster exist in the mountains of Judæa and the Jordan Valley.

There is one more industry that certainly has a big future before it—if indeed it can be called an industry—and that is the tourist industry. Already the peculiar beauty of Palestine, and its wealth in sanctuaries of every creed and in important historical monuments, bring to the country between 15,000 and 18,000 visitors every year. But there are many other things besides in Palestine which might attract the foreigner. Along the coast, where the climate is similar to that of the Riviera, several seaside resorts might with advantage be established. The district round Jericho in winter, the shores of Lake Tiberias in spring, the slopes of Carmel and Tabor in summer, form excellent holiday resorts. In the Jordan Valley and on the shores of Lake Tiberias there are many hot sulphurous springs which possess remarkable curative properties for rheumatic complaints, and are obvious startingpoints for the watering-places of the future. As for lovers of the chase, they will find in Palestine varied and abundant game, such as foxes, gazelles, mountain goats, eagles, wild duck, wild pigeons, partridges, teal, and many more. Tourists who visit the East are generally wealthy; so there can be no doubt that a skilful organisation of the tourist industry, such as has made the fortune of Switzerland and the Riviera, may become for Palestine a potent source of prosperity.

Before leaving this subject of the industrial possibilities of Palestine, we must say a few words as to the natural power which manufacture and agriculture have at their disposal. The Jordan, with its great differences of level over relatively short distances, develops sufficient power to work enormous turbines. Some of its tributaries, such as the Wadi-Fedjas, which still shows numerous remains of aucient mills, and the Yarmuk, which rushes down from the lofty Djolan tablelands into the Jordan Valley, forming several cataracts of great height and considerable energy, might supply motive power for a large number of factories; the same is true of the rivers of the coastal plain—the Audja, the Nahr-el-Zerka, and the Nahr-el-Litani.

The winds are favourable for the installation of aeromotors; that of the Jewish Agricultural Experiment Station works, on

an average, eight hours a day.

From the point of view of artificially generated motive power, the fact that the most important part of the country for economic purposes is a plain running parallel with the coast and of a depth nowhere exceeding fifty miles is peculiarly favourable to the establishment, in the immediate neighbourhood of the ports, of large central power stations, which by suitable communications would distribute motive power over the whole country. These stations, worked by steam or motor engines, would find their most certain customers in the innumerable orchards and irrigated fields which a few years hence will probably cover the coastal plain. As for the necessary fuel, these stations, being situated along the coast, will be able to procure it easily from abroad; but they might also find it in the lignite strata which exist in the country, or in the coarse and otherwise useless straw of sesame, or in the timber of the forests of eucalyptus which the Jewish settlers have planted, and will continue to plant, in every part of Palestine; they might also make profitable use of the important layers of peat in the plain which surrounds Lake Merom, or, by a process of briquettes similar to that employed in the Soudan, utilise the papyrus and other aquatic plants which grow wild, in enormous quantities, all along the Jordan Valley.

The agricultural and industrial development of Palestine will both be helped by and stimulate a considerable growth of commerce, for which the position of the country makes it eminently fitted. Indeed, the geographical situation of Palestine, between the Baghdad Railway and the Suez Canal, between the Mediterranean and the Red Sea, which marks it out as the predestined junction of the great transcontinental

European, Asiatic and African railway systems of the future, is pregnant with remarkable commercial possibilities. There is no doubt that in a not distant future we shall see Palestine become an important centre for goods and passenger traffic

between the three continents of the Old World.

But for the realisation of all these aims it is essential that the present administrative chaos should give place to a modern system of government inspired by no other consideration than the welfare of the country. The efforts of private initiative must be assisted and encouraged by such measures of reform as we have a right to expect from any conscientious Government, such as the creation of accurate land registers, of an agrarian bank, of chambers of commerce, agriculture and industry, and of a uniform currency for the whole country;\* the construction of convenient harbours and warehouses in the principal towns of the coast; the improvement of the existing roads and the construction of new ones; the establishment, in place of the present tithes, which inflict a crushing burden on gross produce and prevent intensive agriculture, of a rational and equitable land-tax; a radical reform of the law courts and police, so that they may become capable of insuring effective justice and security in the country; the promulgation and execution of modern laws as regards mortgages and transfers of property; and the institution of bounties for agriculture and industry.

Still more essential than all these reforms and new departures, in order that the remarkable economic possibilities of the country may be fully exploited, is the immigration of an intelligent and industrious population, which would come to Palestine not in order to make money and then go away again, but in order, at one and the same time, to gain its own subsistence and contribute to the economic progress of the country. This fusion of interests, or, rather, this subordination of the interests of the individual to those of the country, presupposes a lofty idealism, and can only be demanded from a people which looks upon it not as a sacrifice, but as an act of love and of self-emancipation. There is only one such people, and that is

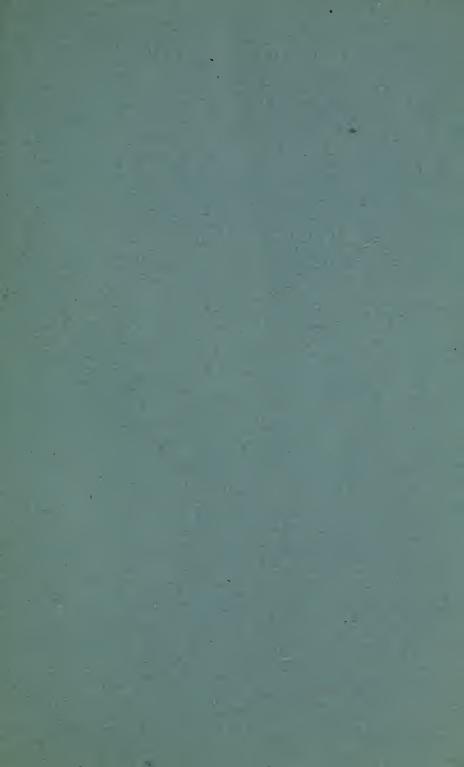
the Jewish people.

 $<sup>^{\</sup>ast}$  At present the coins issued by the Government lave different values in the various towns of Palestine, and the difference in some cases amounts to 20 per cent.





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